

## CLAIM OR CLAIMS

We claim:

1. A rat diabetes model, wherein the rat develops symptoms of type II diabetes and progressive diabetic nephropathy with nodule formation.
2. The rat of claim 1, wherein the rat is of strain T2DN Mimic<sup>MCW</sup>.
3. A population of rats, comprising at least two rats of claim 1.
4. The rat of claim 1, wherein the rat has been genetically altered.
5. The rat of claim 4, wherein the rat has additional genetic material relative to an unmodified rat.
6. The rat of claim 4, wherein the rat lacks genetic material relative to an unmodified rat.
7. A rat obtained by breeding the rat of claim 1 to a second rat.
8. A rat obtained by breeding the rat of claim 4 to a second rat.
9. A cell line derived from the rat of claim 1.
10. A cell line derived from the rat of claim 4.

11. A method of evaluating a test compound's effect on diabetes and diabetic nephropathy comprising the steps of:

(a) exposing the test compound to the rat of claim 1, wherein the rat would develop progressive proteinuria and glomerulosclerosis leading to diabetic nephropathy in the absence of the test compound, and

(b) comparing the rat's development of diabetes and diabetic nephropathy with a control T2DN mimic rat that has not been exposed to the test compound.

12. A method of evaluating a test compound's effect on diabetes and diabetic nephropathy comprising the steps of:

(a) exposing the test compound to the rat of claim 4, wherein the rat would develop progressive proteinuria and glomerulosclerosis leading to diabetic nephropathy in the absence of the test compound, and

(b) comparing the rat's development of diabetes and diabetic nephropathy with a control T2DN mimic rat that has not been exposed to the test compound.

13. A method of evaluating a test compound's effect on cardiac damage produced by type II diabetes comprising the steps of:

(a) exposing the test compound to the rat of claim 1, wherein the rat would develop cardiac damage in the absence of the test compound, and

(b) comparing the rat's development of cardiac damage with a control T2DN mimic rat that has not been exposed to the test compound.

14. A method of evaluating a test compound's effect on vascular damage produced by type II diabetes comprising the steps of:

- (a) exposing the test compound to the rat of claim 1, wherein the rat would develop vascular damage in the absence of the test compound, and
- (b) comparing the rat's development of vascular damage with a control T2DN mimic rat that has not been exposed to the test compound.

15. A method of evaluating a test compound's effect on eye damage produced by type II diabetes comprising the steps of:

- (a) exposing the test compound to the rat of claim 1, wherein the rat would develop eye damage in the absence of the test compound, and
- (b) comparing the rat's development of eye damage with a control T2DN mimic rat that has not been exposed to the test compound.